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EXAMINER

KUHNS, SARAH LOUISE

ART UNIT

PAPER NUMBER

1761

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/735,485	Applicant(s) MUELLER ET AL.	
	Examiner Sarah L Kuhns	Art Unit 1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 44 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 44 refers to a "tie concentrate." It is unclear what is meant by this term and no definition is provided in the specification. Appropriate correction required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9, 10, 11-14, 15, 20-23, and 27-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dayrit et al., U.S. Patent 6,599,639 in view of Ennis et al., U.S. Patent 6,663,905.

In regard to claims 1 and 2, Dayrit discloses a package comprising a first wall comprising a multilayer structure comprising a heat-sealant layer (24) comprising a material selected from the group consisting of polyolefins, polyamides, ionomers, and

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blends thereof (column 5, line 45); a first polyamide layer (14), and a first tie layer (18), wherein all layers are coextruded together to form the multilayer structure (abstract).

Dayrit does not expressly disclose an oriented multilayer structure. However, Ennis teaches a biaxially-oriented multilayer structure (column 2, line 40) comprising an outer layer (112), a barrier layer (114), a puncture-resistant layer (116), and a sealant layer (118). It would therefore be obvious to utilize an oriented multilayer structure in order to provide the structure with toughness, puncture resistance and oxygen barrier properties. In addition, Dayrit fails to expressly disclose the use of the multilayer structure for packaging bone-in meat; however, Ennis teaches the use of a multilayer structure (column 2, line 22) in a package for bone-in meat (column 1, line 7). It would therefore be obvious to extend the use of the multilayer structure of Dayrit to packaging bone-in meat because multilayer structures are resistant to puncture by bone material.

In regard to claim 3, Dayrit fails to disclose heat-shrinking the multilayer structure around a meat product. However, Ennis discloses a multilayer structure that is heat-shrunk around the meat product (column 23, line 38), and it is well established in the field to use multilayer structures in such a way in order to protect food from the external environment and increase shelf-life.

In regard to claim 4, Dayrit discloses a tie layer disposed between the heat-sealant layer and the first polyamide layer (20).

In regard to claim 5, Dayrit discloses a polyamide layer disposed between a heat-sealant layer and a tie layer (16).

In regard to claim 6, Dayrit discloses the heat-sealant layer comprising polyethylene (column 5, line 45).

In regard to claim 7, Dayrit discloses a heat-sealant layer comprising a blend of linear low density polyethylene and low density polyethylene (column 5, line 45).

In regard to claims 8 and 28, Dayrit discloses polyamide layers comprising a blend of semi-crystalline polyamide and amorphous polyamide (column 5, line 24).

In regard to claims 9 and 29, Dayrit discloses a polyamide layer comprising a blend of nylon 6 and amorphous polyamide (column 5, line 24).

In regard to claims 10 and 30, Dayrit discloses polyamide layers comprising a blend of nylon 6,66 and amorphous polyamide (column 5, line 24).

In regard to claims 11, 14, 31 and 34, Dayrit does not disclose the composition by weight of the polyamide layer, but it is known in the field to blend amorphous polyamides and semi-crystalline polyamides, and it would therefore be obvious to choose a weight composition, such as those claimed, that maximized implosion resistance, forming ability, and the other qualities sought.

In regard to claims 12, 13, 32 and 33, Dayrit discloses polyamide layers comprising a blend of nylon 6,69, amorphous polyamide, and a second semi-crystalline polyamide (column 5, line 24).

In regard to claim 15, Dayrit discloses a multilayer structure further comprising a second tie layer (20).

In regard to claims 20 and 21, Dayrit discloses a coextruded film (column 2, line 23), but fails to disclose the use of irradiation to promote cross-linking. However, Ennis

discloses a multilayer structure that is irradiated to promote crosslinking both between the layers and within the layers of the structure, and wherein all layers are coextruded to form the multilayer structure (column 18, line 32). It would be obvious to use irradiation to promote cross-linking, thereby increasing the strength of the multilayer structure.

In regard to claims 22 and 23, Dayrit discloses a film thickness of 3.5 to 5.5 mils (column 6, line 63).

In regard to claim 27, Dayrit discloses second polyamide layer, wherein the first and second polyamide layers are disposed on opposite sides of a tie layer (figure 1).

In regard to claims 35 and 36, Dayrit discloses a multilayer structure further comprising an outer layer (22), comprising a material selected from the group consisting of polyolefins, polyamides, ionomers, polyesters, and blends thereof (, wherein the first polyamide layer (14) is disposed between a tie layer (20) and the outer layer (22) and the second polyamide layer (16) is disposed between the tie layer (18) and the heat-sealant layer (24).

In regard to claim 37, Dayrit discloses a multilayer structure comprising a second tie layer disposed between the outer layer and the first polyamide layer (figure 1, outer layer 22, polyamide layer 16, tie layers 12 and 18).

In regard to claim 38, Dayrit discloses a multilayer structure further comprising a second tie layer disposed between the heat-sealant layer and the second polyamide layer (figure 1, heat-sealant layer 24, polyamide layer 14, tie layers 12 and 20).

In regard to claim 39, Dayrit fails to disclose a heat-sealant layer comprising an amount of polymer greater than an amount of polymer in the outer layer. However,

Dayrit does teach that the final film thickness can vary (column 9, line 63) and it is therefore expected that the individual layers of a multilayer structure may also vary in thickness, which infers that the amount of polymer in the layers can also vary.

In regard to claim 40, Dayrit discloses a second tie layer (18) between the outer layer (22) and the first polyamide layer (14), and a third tie layer (20) disposed between the heat-sealant layer (24) and the second polyamide layer (16).

In regard to claims 41-43, Dayrit fails to disclose the free shrink percent and orientation factor of the multilayer structure. However, the propensity of the film upon exposure to heat to shrink is imparted to the film by orientation of the film during its manufacture. Typically, the manufactured film is stretched in a longitudinal direction, a transverse direction, or both, in varying degrees to impart a certain degree of shrinkability in the film upon subsequent heating. It would therefore be obvious to choose an orientation factor that allows the multilayer structure to have the desired free shrink percentage.

3. Claims 16-19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dayrit et al., U.S. Patent 6,599,639 in view of Ennis et al., U.S. Patent 6,663,905, as applied to claims 1 and 27 above, in further view of Vicik, U.S. Patent 5,698,279.

In regard to claim 16, Dayrit fails to disclose a polyamide layer forming the outer layer outer layer of the multilayer structure. However, Vicik teaches the use of a polyamide layer as an outer layer (column 6, line 61) of a multilayer structure that is heat-shrinkable and used in packaging meat (column 1, line 6). It would therefore be

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obvious to have a polyamide layer forming the outer layer in order to provide improved biaxial stretching.

In regard to claim 17, Dayrit fails to disclose a multilayer structure that is annealed. Vicik does teach an annealed multilayer structure (column 7, line 23). As such, it would be obvious to anneal the multilayer structure claimed in order to stabilize the film.

In regard to claims 18 and 19, Dayrit fails to disclose moisturizing the multilayer structure by application of water or plasticizing the structure. Vicik teaches that a multilayer structure can be plasticized by contact with water (column 11, line 22). It would therefore be obvious to plasticize the multilayer structure claimed in order to facilitate orientation.

In regard to claim 24, Dayrit fails to disclose a package in the form of a tube having a space therein for a product, but such a package is taught by Vicik (figure 4). It would be obvious to modify the shape of the package in order to better accommodate the specific foodstuff that is being packaged.

4. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dayrit et al., U.S. Patent 6,599,639 in view of Ennis et al., U.S. Patent 6,663,905, as applied to claims 1 and 27 above, in further view of Bekele, U.S. Patent, 5,491,009.

In regard to claims 25 and 26, Dayrit fails to disclose a package wherein the first wall is sealed to second wall. However, Bekele discloses a package wherein the first wall is heat-sealed to a second wall, which comprises the same multilayer structure, and wherein there is space between the two walls for a meat product (column1, line 46). It

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would be obvious to use the multilayer structure of Dayrit in the way taught by Bekele in order to better accommodate the certain food, such as bone-in meat, that is being packaged.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah L Kuhns whose telephone number is 571-272-1088. The examiner can normally be reached on 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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